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UNITERM Food Systems, Inc.

Cooking Trial Data

Test #	Belt Speed	Cook Time	Product: Turkey Breast	Supplied By: Boiles Head			Remark
				Start Temperature C.	Cooked Weight	Yield	
				Zone 1	Zone 2		
#1	48	10 MIN	550	650			90% MES - Poly excell
#2	11	V	V	11			30% MES - Poly 100%
#3							50% mes poly
#4							50/50% slice or
#5							ex test source
#6							

NOTES

#1

#2

#3

#4

#5

#6

PTO-004100

U-8198

CONFIDENTIAL-ATTORNEY ONLY

UNITHERM Food Systems, Inc.

Cooking Trial Data

Product: TURKEY BREAST								Date: 2/7/97
Test #	Belt Speed	Cook Time	Temperatures C.	Start Cooked Weight	Yield	Internal Temp. F.	Supplied By: TURKEYS	Remarks
ONE OF EACH	26	18 min	550 650					5 - 1 OR 2 EA. OVER ROAST
HEART	4	80	6	650				BEST ROAST OVER TOAST
HEART	5	90 C	5.5	550				30% MELTS OR SIZZLES
HEART	6	103	5	550				50% MELTS OR SIZZLES
Poultry Pack	7	103	5	550				30% SMOKED 24 P
Plain	8	Cook D	4.5 min					2.2 30% 24 P
Heart	9	NOTES	Good					50% 24 P
#1, 2, 3								TOAST - (BURNED TOAST)
#4								LEAVES OK - MAYBE A BIT DARK
#5								COOK GOOD
#6								COOK GOOD
#7								COOK GOOD
#8								COOK GOOD
#9								COOK GOOD
#10								COOK - LIGHT - OK 30% 24 P SMOKE
#11								COOK 50% 24 P
#12								30% MELTS OR SIZZLES
Plain	#13							30% MELTS POLY
Round	#14							30% MELTS POLY OKA. SMOKED

U-04859

PTO-004101

UNITERM Food Systems, Inc.

Cooking Trial Data

Product: TURKEY BREASTS							Date: 2/7/97	
Test #	Belt Speed	Cook Time	Temperatures C.	Start Weight	Cooked Weight	Yield	Internal Temp. F.	Supplied By: PURDUE
			Zone 1	Zone 2				Remark
#4	80.00	6 MIN	550°	650°		- 2.0%		HEART SHAPED OVEN ROAST
#5	90.00	5.5 MIN	550	650		- 2.1%		HEART SHAPED 30% MAIL SPLIT
#6	103.00	5 MIN	550	650		- 1.9%		HEART SHAPED 30% MAIL SPLIT
#7	103.00	5 MIN	550	650		- 2.6%		PLAIN ROUND PACK
#8	108.00	4.5 MIN	550	650		- 2.2%		30% CHAMSOLE SELECT 24P PLAIN ROUND PACK
#9	108.00	4.5 MIN	550	650		?		30% CHAMSOLE SELECT 24P HEART SHAPED 30% CHAMSOLE SELECT 24P

NOTES

U-04858

PTO-004102

UNITERM Food Systems, Inc.

Cooking Trial Data

Test #	Belt Speed	Cook Time	Product: Turkey Breakfast			Start Weight	Cooked Weight	Yield	Internal Temp. F.	Supplied By: PURDUE	Remark
			Zone 1	Zone 2	C.						
#10	103.00	5 MIN	550	650				-3.5%		IMPERIAL PACK	
#11	2 RUNS	10 MIN	550	650				-3.5%		30% CHARSC SELECT 24P	
#12	103.00	5 MIN	550	650				-3.5%		IMPERIAL PACK	
#13	103.00	5 MIN	550	650				-3.5%		30% MAIOSSE PLAIN ROUND	
#14	2 RUNS	10 MIN	550	650				-3.5%		30% OKAHWAH SMOOTH PLAIN ROUND	
#15	103.00	5 MIN	550	650				-3.7%		30% HICKORY PLAIN ROUND	
NOTES #16	2 RUNS	5 MIN	550	650				-3.6%		30% MESQUITE POLY	
								-4.2%		30% FLICKORY	
#1											
#2											
#3											
#4											
#5											
#6											

U-05792

PTO-004103

#4	6 min	2.9 loss over R.A.S.T	
#7	Round PLAIN	5m	2.6 loss 24P 30%
#5		5.5 min	2.1 loss 30 MALESE
#8	PLAIN ROUND	4.5	2.2 30 24P
#10	IMPERIAL	5min	3.5 30 24P
#11	IMPERIAL	10min	3.25 30 24P
#16		5min	1.9 30 MALESE
#13	PLAIN ROUND	5MIN	3% 30 OKLA smoked
#14	IMPERIAL	10min	3.7 30% HICKORY
#15	PLAIN ROUND	5 min.	3.6% 30 MES Poly
#16	PLAIN ROUND	10min	4.2 30% HICKORY

U-04860

PTO-004104

UNITHERM Food Systems, Inc.

Cooking Trial Data

U-03969

PTO-004105

NORBEST TURKEY BREAST

$$8.945 = 96\%$$

#1 SKINLESS IN Ø 9-275 OUT Ø 8.89
SET Ø 35 Hz - 8 min. 600-650 95%
SMOKE Ø 30% CHARCOL SELECT 24 P.

#2 SKINLESS Ø 9.58 IN OUT Ø 9.3
SET Ø 56 Hz - 5 min 600-650 97%
30% 24P

#3 SKIN ON IN 10.4 OUT Ø 9.5 90%
Ø 40 Hz - 7 min 600-650
30% 24P

#2 SKIN ON 9.845 IN OUT 9.4 95%
40 Hz - 7 min 600-650
50% MELT

U-03970

PTO-004106

UNITHERM Food System , Inc.

Cooking Trial Data

		Product: Turkey Breast			Supplied By: Purdue		
Test #	Belt Speed	Cook Time	Temperatures C.	Start Cooked Weight	Internal Temp. F.	Yield	Remark
		Zone 1	Zone 2				
#10	103.00	5 MIN	550		-3.5%		IMPERIAL PACK
#11	103.00	10 MIN	550		3.25%		30% CHARCOAL SELECT 24 P
#12	103.00	5 MIN	550		?		IMPERIAL
#13	103.00	5 MIN	550		-3.0%		30% MAICOS E PLAIN ROUNDS
#14	103.00	10 MIN	550		-3.7%		30% OKLAHOMA SMOKED PLAIN ROUNDS
#15	103.00	5 MIN	550		-3.6%		30% HICKORY PLAIN ROUNDS
NOTES	2 RUNS	10 MIN	550	650	-4.2%		30% MESQUITE POLY
#1							
#2							
#3							
#4							
#5							
#6							

U-03963

PTO-004107

UNITHERM Food Systems, Inc.

Cooking Trial Data

Product: TURKEY BREASTS

Supplied By: PURDUE

Belt Speed Cook Time Temperatures C. Start Weight Cooked Weight Yield Internal Temp. F. R mark

Test #				Zone 1	Zone 2			
#4	80.00	6 MIN	550°	650°		-2.0%		HEART SHAPED
#5	90.00	5.5 MIN	550	650		-2.1%		OVEN ROAST
#6	103.00	5 MIN	550	650		-1.9%		HEART SHAPED
#7	103.00	5 MIN	550	650		-2.6%		30% MAILOSE
#8	108.00	4.5 MIN	550	650		-2.2%		PLAIN ROUND PACK
#9	108.00	4.5 MIN	550	650		?		30% CHARSEL SELECT 24P HEART SHAPED
								30% CHARSEL SELECT 24P

NOTES

AB

AB

AB

AB

AB

AB

Date: 2/7/91

U-03964

PTO-004108

JNITHERM Food Systems, Inc.

Cooking Trial Data

			Product: TURKEY BREASTS			Supplied By: PURDUE		
Test #	Belt Speed	Cook Time	Start Temperature C.	Cooked Weight	Yield	Internal Temp. F.	Temp. F.	Remark
			Zone 1	Zone 2				
#4	80.00	6 min	550F	650F		-2.02		HEART SHAPED OPEN ROAST
#5	90.00	5.5 min	550	650		-2.1%		HEART SHAPED 30% CHARS
#6	103.00	5 min	550	650		-1.9%		HEART SHAPED 30% CHARS
#7	103.00	5 min	550	650		-2.6%		PLAIN ROUND PACK 30% CHARS SELECT 24P
#8	108.00	4.5 min	550	650		-2.2%		PLAIN ROUND PACK 30% CHARS SELECT 24P
#9	108.00	4.5 min	550	650	?			HEART SHAPED 30% CHARS SELECT 24P

NOTES

44

44

U-03965

PTO-004109

UNITHERM Food Systems, Inc.

Cooking Trial Data

U-03966

PTO-004110

#4 6 min. 22 loss over RAST

#7 Round PLAIN 5m 2.6 loss 24P 30%

#5 5.5 min 2.1 loss 30 MALOSE

#8 PLAIN ROUND 4.5 2.2 30 24P

#10 IMPERIAL 5min 3.5 30 24P

#11 IMPERIAL 10min 3.25 30 24P

#6 5min 1.9 30 MALOSE

#13 PLAIN ROUND 5MIN 3% 30 % KLA
smoke

#14 IMPERIAL 10min 3.7 30% HICKORY

#15 PLAIN ROUND 5 min. 3.6% 30 MES Poly

#16 PLAIN ROUND 10min 4.2 30% HICKORY

U-03967

PTO-004111

UNITHERM Food Systems, Inc.

Cooking Trial Data

Cooking Trial Data							Product: Turkey Breast	Supplied By: P. & D. J. S.	Date: 2/5/97
Test #	Belt Speed	Cook Time	Temperatures C.	Start Weight	Cooked Weight	Yield	Internal Temp. F.		Remarks
ONE OF EACH	1, 2, 3	26 min	55C Zone 1	650	TOAST				5 - 1 CF EA. over Roast
HEART	#4	80	55C Zone 2	650	TOAST				over Roast
HEART	#5	90	5.5	550	550				30% MAICOS C. S. S. 5.5 min
HEART	#6	103	5	550	650				SC 2. MAICOS C. S. C.
PORK	#7	103	5	550	650				2.6% 30% smoke C 24 P
PORK	#8	Cook D	4.5 min				2.2	30%	2.4 P
HEART NOTES	9	Cook C					2.2	30%	2.4 P
#1, 2, 3			- TOAST						
#4			- LEAKS - OK						
#5			- MAYBE A BIT DARK						
#6			- GOOD						
#7			- REAR GOOD						
#8			- GOOD						
#9			- GOOD						
#10			- LIGHT - OK						
#11	"		4.5 sec. D, P 24 P						
#12	"		30% MAICOS						
#13	"		30 MEG POLY						
#14	"		30% MAICOS						
Imparce	"		OKCA. Smoke						

U-03968

PTO-004112

UNITERM Food Systems, Inc.

Cooking Trial Data

U-03969

PTO-004113

NORBEST TURKEY BREAST

#1 SKINLESS IN @ 9-275 OUT @ 8.89
SET @ 35 Hz - 8 min. 600 - 650 8.945 = 96%
SMOKE @ 30% CHARCOAL SELECT 24 P. 95%

#2 SKINLESS @ 9.58 in OUT @ 9.5
SET 56 Hz - 5 MIN 600-650 97%
30% 24P

SKIN ON IN 10.4 ^{in Porac} OUT 9.5 9.96 = 95%
40 Hz - 7 min 600-650 ~~9.5 OUT 90%~~
30% 24P

#2 SKIN ON 9.845 in OUT 7.4 95%
40 Hz 7 min 600-650
50% charcoal

UNITHERM Food Systems, Inc.

Cooking Trial Data

Test #	Belt Speed	Cook Time	Product: Turkey Breast			Supplied By: F.R.D.U.S	Remark
			Start Weight	Cooked Weight	Yield		
ONE 1, 2, 3 OF EACH	26 min	Zone 1 Zone 2					
HEART	4	18 min	550	650	TOAST	3 - 1 CFB EA. OVER ROAST	
HEART	5	9 C	5.5	550	650	Best MELTED OVEN ROAST	
HEART	6	103	5	550	650	30% MAICRO 5.5 min	
Round Pack	7	103	5	550	650	SC 2. MAICRO 5.5 C	
Plain	8	Cook D	4.5 min			2.65 30% SMOKE 24 P	
Round	9	NOTES	9 GOOD			2.2 30% 24 P	
	#1, 2, 3		TOAST			30% 24 P	
	#4					BURNT TOAST	
	#5					LEAKS OK - MAYBE A BIT DARK	
	#6					GOOD	
	#7					REAL GOOD	
	#8					GOOD	
	#9					GOOD	
SOUP	#10	-	LIGHT - OK			30% 24 P 5 min	
WATER	#11		50, 50.			4.5 SEC. D, P 24 P	O
PLAIN	#13		30 MTS POLY				
ROUND	#14		30% MELTED OVEN ROAST SMOKE				

U-03971

PTO-004115

#4	6 min	29% loss	over RUST
#7	ROUND PLAIN	5m	2.6 Loss 24P 30%
#5		5.5 min	2.1 loss 30 MALESE
#8	PLAIN ROUND	4.5	2.2 30 24P
#10	IMPERIAL	5min	3.5 30 24P
#11	IMPERIAL	10min	3.25 30 24P
#16		5min	1.9 30 MALESE
#13	PLAIN ROUND	5MIN	3%
#14	IMPERIAL	10min	3.7 30% HICKORY
#15	PLAIN ROUND	5 min.	3.6% 30 MES Poly
#16	PLAIN ROUND	10min	4.2 30% HICKORY

PTO-004116

U-03972

UNITERM Food Systems, Inc.

Cooking Trial Data

Test #	Product: TURKEY BREASTS					Supplied By: PURDUE	Date: 2/7/91
	Belt Speed	Cook Time	Start Temperature C.	Cooked Weight	Yield		
			Zone 1	Zone 2			
#4	80.00	6 min	550F	650F		-2.0%	HEART SHAPED QUEEN ROAST
#5	90.00	5.5 min	550	650		-2.1%	HEART SHAPED 30% MAILOSE
#6	103.00	5 min	550	650		-1.9%	HEART SHAPED 30% MAILOSE
#7	105.00	5 min	550	650		-2.6%	PLAIN ROUND PACK 30% CHARSOL SELECT 24P
#8	108.00	4.5 min	550	650		-2.2%	PLAIN ROUND PACK 30% CHARSOL SELECT 24P
#9	108.00	4.5 min	550	650	?		HEART SHAPED 30% CHARSOL SELECT 24P

NOTES

#3

#2

#4

#5

#6

PTO-004117

U-03973

UNITHERM Food Systems, Inc.

Cooking Trial Data

Test #	Belt Speed	Cook Time	Product: Turkey Breast		Start Cooked Weight	Internal Yield	Temp. F.	Supplied By: PURDUE Remarks
			Zone 1	Zone 2				
#10	103.00	5 min	550	650		-3.5%		IMPERIAL PACK
#11	103.00	2 Runs	550	650				30% CHICKEN SELECT 24P
#12	103.00	10 MIN	550	650		3.25%		IMPERIAL PACK
#13	103.00	5 MIN	550	650		?		30% CHICKEN SELECT 24P
#14	103.00	10 MIN	550	650		-3.0%		IMPERIAL PLAIN RECIPE
#15	103.00	5 MIN	550	650		-3.7%		30% CHICKEN PLAIN RECIPE
NOTES	2 RUNS	10 MIN	550	650		-3.6%		30% MESQU. REC RECIPE
#1					-4.2%			30% CHICKEN RECIPE
#2								
#3								
#4								
#5								
#6								

PTO-004118

U-03974

UNITHERM Food Systems, Inc.

Cooking Trial Data

Product: Turkey Breast
Supplied By: Boars Head

Test #	Belt Speed	Cook Time	Temperature C.	Start Weight	Cooked Weight	Yield	Internal Temp. F.	Remarks
			Zone 1	Zone 2				
#1	48	10 min	550	650				50% mes - to 144 excell.
#2	11	11	11					307° mes 109
#3								50% mes Poly mes poly
#4								50% mes skin on
#5,								Ex test since
#6								

NOTES

#1

#2

#3

#4

#5

#6

PTO-004119

U-03975

UNITHERM Food Systems, Inc.

Cooking Trial Data

Product: TURKEY BREASTS

Supplied By: PURDUE

Test #	Belt Speed	Cook Time	Temperatures C.	Start Weight	Cooked Weight	Yield	Internal Temp. F.	Remarks
		Zone 1	Zone 2					
#4	80.00	6 min	550F	650F			-2.0%	HEART SHAPED OVEN ROAST
#5	90.00	5.5 min	550	650			-2.1%	HEART SHAPED 30% MAILLOSE
#6	103.00	5 min	550	650			-1.9%	HEART SHAPED 30% MAILLOSE
#7	103.00	5 min	550	650			-2.6%	PLAIN ROUND PACK
#8	108.00	4.5 min	550	650			-2.2%	30% CHAOSOL SELECT 24P PLAIN ROUND PACK
#9	108.00	4.5 min	550	650		?		30% CHAOSOL SELECT 24P HEART SHAPED

NOTES

#3

#4

#5

#6

#7

U-03976

PTO-004120

UNITHERM Food Systems, Inc.
Cooking Trial Data

Test #	Belt Speed	Cook Time	Product: <u>TURKEY BREASTS</u>		Start Weight	Cooked Weight	Yield	Internal Temp. F.	Supplied By: <u>PURDUE</u>	Remarks
			Zone 1	Zone 2						
#10	103.00	5 MIN	550	650						IMPERIAL PACK
#11	103.00	10 MIN	550	650						30% CHARSOL SELECT 24P
#12	103.00	5 MIN	550	650						IMPERIAL
#13	103.00	5 MIN	550	650						30% MAILOSE PLAIN ROUND
#14	103.00	10 MIN	550	650						30% OKAHAMA SELECT PLAIN ROUND
#15	103.00	5 MIN	550	650						30% HICKORY PLAIN ROUND
NOTES	103.00	MIN	550	650						30% MESQUITE POLY
#1										
#2										
#3										
#4										
#5										
#6										

U-03977

PTO-004121

UNITHERM Food Systems, Inc.

Cooking Trial Data

Cooking Trial Data							Product: Turkey Breast	Supplied By: Puridus	Date: 2/7/97
Test #	Belt Speed	Cook Time	Temperatures C.	Start Weight	Cooked Weight	Yield	Internal Temp. F.		Remarks
ONE OF EACH	1,2,3	26 min	550 Zone 1	650 Zone 2			TOAST	5 - 10F. EA. OVER ROAST	
HEART	4	80	650	650				30% MEAT	OVER ROAST
HEART	5	90	5.5	5.5				30% MEAT	OVER ROAST
HEART	6	103	5	550	650			30% MEAT	OVER ROAST
Round Pack	7	103	5	550	650			30% MEAT	OVER ROAST
Pain									
Pain	8	Cook D	4.5 min					2.6% SMOKED	24P
Pain								2.2	30%
Heart Notes	9	Cooked						30% SMOKED	24P
#1, 2, 3									
#4									
#5									
#6									
#7									
#8									
#9									
System	#10	-	LIGHT - OK	30%	24	P	SIN		
System	#11		SO, SO.	4.5 SEC.	D, P	24P			
"	#12		30% MEAT	MISS	TOOLY				
Pain	#13	30							
Pain	#14	30%							
1/1/97									

PTO-004122

U-03978

#4 6 min 220 loss over R.A.S.T

#7 Round Plain 5m 2.6 Loss 24P 30%

#5 5.5 min 2.1 Loss 30 MALESE

#8 Plain Round 4.5 2.2 30 24 P

#9 IMPERIAL 5min 3.5 30 24 P

#10 IMPERIAL 10min 3.25 30 24 P

6 5min 1.9 30 MALESE

13 Plain Round 5min 3% 30 % KLA
smoke

14 IMPERIAL 10min 3.7 30% HICKORY

15 Plain Round 5 min 3.6% 30 MES Poly

16 Plain Round 10min 4.2 30% HICKORY

PTO-004123

U-03979

UNITHERM Food Systems, Inc.

Cooking Trial Data

Cooking Trial Data				Product: Turkey Breast				Supplied By: Purdec		
Test #	Belt Speed	Cook Time	Temperatures C.	Start Weight	Cooked Weight	Yield	Internal Temp. F.	Remark		
			Zone 1 Zone 2							
#10	103.00	5 min	550				-3.5%	IMPERIAL PACK		
#11	103.00	2 Runs	550					30% CHARBOL SECRET 24 P		
#12	103.00	10 min	550	650			3.25%	IMPERIAL		
#13	103.00	5 min	550	650			?	30% MAICOSÉ PLAIN ROUND		
#14	103.00	5 min	550	650			-3.0%	30% OKLAHOMA SECRET PLAIN ROUND		
#15	103.00	5 min	550	650			-3.1%	30% HICKORY PLAIN ROUND		
NOTES	2 Runs	10 min	550	650			-3.6%	30% MESQUITE PLAIN		
#1							-4.2%	30% HICKORY		
#2										
#3										
#4										
#5										
#6										

U-03980

PTO-004124

UNITHERM Food Systems, Inc.

Cooking Trial Data

Test #	Belt Speed	Cook Time	Product: Wings Drums Hocks			Supplied By: A + C	Internal Temp. F.	Remarks
			Start Weight	Cooked Weight	Yield			
#1	5050	43 min	256° STEAM ON	3.585	2.875	smoke p70	2 WINGS TEST SMOKE AFTER 43 MIN. TOTAL TIME 1:10	
#2	5050	43 min	250° STEAM ON	4.290	3.725	smoke p75	2 DRUM TEST TOTAL TIME 1:10. FINISH TEST	
#3	5030	24 min.	250° STEAM ON	2.640	2.395	smoke 125°	24 HOCK TEST OVERALL SMOKE TEMP 178°	
#4	5030	24 min	250° STEAM ON	3.475	3.030	smoke 160°	2 RIBLET TEST FINISHED IN RAPID FLOW 4 MINUTES @ 425°	
#5								
#6								

NOTES ALL SMOKE APPLIED @ 30% 24° SPRAYED LIGHTLY FOR 60 SEC.

- #1 TWO WING TEST, COMBINED) START ? COOK WEIGHT AS ABOVE
WINGS LOOK GREAT, BUT BOILED STAND LESS TIME
- #2 TWO DRUM TEST, COMBINED) START ? COOK WEIGHT AS ABOVE
COOKED FOR 43 MIN. THEN SET SMOKE FOR 27 min.
- #3 TWO HOCK TEST
REHEAT
COOK BEFORE SMOKE APP @ 250° THEN APPLY SMOKE FOR 24 min. P 250°
- #4 RIBLET TEST. COOK FOR 24 min @ 250° THEN APP SMOKE. FINISH IN RAPID FLOW OVEN - 4 min @ 425°. BELT @ 30 MZ, FAUS @ 40 MZ.

U-04001

PTO-004125

M E M O R A N D U M

TO: Bob Wood
Vernie Klasen
Denis Anderson
Randy Alslaben
Brett Sims

FROM: Jeff Dierenfeld *[Signature]*

DATE: February 14, 1997

RE: Unitherm Visit and Progress Report

OPERATION OF THE SYSTEM

The bowl breasts will be removed from the rack manually and placed on the slitting conveyor (Some slight modifications will be made to the knife configuration to ease removal of the bag). The bowl breast travels down the conveyor and is stopped by a swing arm with an air needle. The bag is actually inflated like a balloon (the amount of inflation is determined by a timer). The inflation process does an excellent job of separating the cling film from the product. The breast then travels across a slitter which opens the bag. The product can then be easily removed from the bag manually.

The stripped units will then be netted manually and placed on the system conveyor. The first step is a smoke spray or atomization. From there, the breasts continue along the conveyor into the oven cabinet. Temperatures are set around 600 degrees. During the 9 MINUTE smoke cycle, the breasts travel through 3 zones, achieving a 97% cook yield.

From there, the breasts are conveyed into a chill cabinet for a 15–20 minute chill back down to <40 degrees and are conveyed directly to the 8600 pack line.

TEST RESULTS

The 12 units that we tested while I was at the Unitherm facility show that this system has excellent potential for greatly improving the efficiency of our process. We tested several smoke concentrations, application procedures, and oven dwell times, so the test units range from the light end of the spec to the dark. Once we determine the correct process for our product, I believe we will have great consistency.

FOLLOW UP

I will continue to work with Unitherm on layouts for our facility and the exact capacities and system modifications that will make it best for us. I am recommending that we continue to work with Unitherm and ultimately purchase their in-line cooking system. I will be following up with costs, and other information as it becomes available to me.

c

Jeff Shodean
Scott Anspach

Lola minke
Kyle Setrum

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Restricted Access
U-06859

UNITHERM Food Systems, Inc.

Cooking Trial Data

Test #	Belt Speed	Cook Time	Product: Honey Glazed Ham	Start Temperature C.		Cooked Weight	Yield	Internal Temp. F.	Remarks
				Zone 1	Zone 2				
32%	34.00	14 min	600°F	650°F				50%	SOFT CHASED SEEN 24°F
32%	40.00	12 min	"	"				30%	"
38%	48.00	10 min	"	"				22%	CLOSE COOK
38%	49.75	9 min	"	"				22%	
38%	53.50	8.5	"	"				22%	
#6									

NOTES

#1 100% Dark#2 Still Too Dark#3 CLOSE#4 OK#5 OK

#6

NATURAL BROWN
 SKIN ON
 TURKEY BREAST

	BELT SPEED	DWELL TIME	ZONE 1	ZONE 2
#1	28. HZ	10 MIN.	515	525
#2	25 HZ	11 MIN.	515	525
#3	23. HZ	12 MIN.	500	500
#4	21.5 HZ	13 MIN.	500	500
#5	28 HZ	10 MIN	525	550
#6				

U-04003

PTO-004128

UNITHERM Food Systems, Inc.

Cooking Trial Data

Product: Volley BlendSupplied By: Rae Foods

Test #	Belt Speed	Cook Time	Start Temperature C.	Cooked Weight	Internal Temp. F.	Yield	Remarks
		Zone 1	Zone 2				
#1	15:00	19 min	425	500			STEAM ZONE 1+2 TOO LIGHT
#2	15:00	19 min	450	525			STEAM ZONE 1+2
#3	15:00	19 min	550	625			STEAM ON 1+2
#4	22:00	13 min	550	625			KIND OF BURST MORE STEAM
#5	25:00	11 min	550	625			
#6	23:00	12 min	500	600			STILL TOO LIGHT

NOTES

#1 SKINLESS TOO LIGHT

#2 SKINLESS TOO LIGHT, STEAM AND NOT BAD BUT ~~SKINLESS~~

#3 22:00 13 min STEAM

#4 22:00 13 min STEAM 500 600

#5

#6

U-04004

PTO-004129

F. D. Dryden

Hormel Foods Research Report

Attention: W. Dion - CO M. Slette - CO

Project Name: Fast & Easy Sausage Browning Tests

Copy List:

M. Benson - R&D
T. Hadden - OKC

D. White - OKC
R. Albers - OKC

Written By: S. Hoevet - 5822 J. Ulrich - 5810

Objective:

Evaluate browning tests on Fast & Easy FC504 Sausage

Summary:

A cutting was held at R&D on February 18, 1997. Those attending were W. Dion, M. Slette, J. Ulrich and S. Hoevet.

Product Shown and Comments:

1. Fast & Easy Control with Caramel Color
2. Fast & Easy all Dextrose with no Caramel Color:
flavor unacceptable
not as spicy
color not improved
3. Fast & Easy with Maltose added:
flavor not acceptable
color too dark
4. Fast & Easy Control, no caramel color, pre-fried / impingement oven
flavor not acceptable
oily taste

Recommendation:

No change in formulation or procedure.

Next Steps:

1. Heat & Control to visit OKC to fine tune impingement oven for yields
2. Heat & Control will attempt to improve color without caramel color
3. OKC, Operations, R&D will evaluate searing unit from Heat & Control for color and yield

Anything we do in the future to change the color must not compromise the present flavor or costs.

pjh (11708)

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U-06864

FS155.00
February 3, 1997

**FAST & EASY PORK SAUSAGE
NATURAL SPICE
WITH RED ARROW MALLIOSE**

FORMULATION

Pork 40% \pm 1% Fat	93.19%
Water	3.00%
Encapsulated Salt	0.60%
Spice	2.21%
Red Arrow Malliose (dry)	1.00%

SPICE

Core Salt TBHQ	0.13%
Regular Salt	0.60%
Sugar	0.50%
Ground Sage	0.30%
Black Pepper 10/20	0.33%
Crushed Red Pepper	0.07%
Herbalox, Type O	0.06%
Firminich 862.192 Lemon	0.10%
Spectra 88	0.12%

PROCEDURE

1. Pre-break Regular Pork and 72% Lean Pork 1" and analray separately. Calculate meat mix for 40% \pm 1% Fat.
2. Add meat to Mixer and recheck fat. The mixer must be set at slow speed and only intermittently to allow addition of meat. Do not run mixer continuously when adding meat.
3. Add water and spice and Malliose. Mix for 3 minutes with nitrogen.
4. Add salt and mix 2 minutes with nitrogen.
5. Final grind 5/32" into V-Mag container.
6. Form on Formax Plate #7795 with tenderformer.
7. Immediately cook on impingement oven to 160°F. Internal.
8. After cooling, IQF and layer pack in 10 lb. Food Service box with inter leaf sheets and poly liners.
9. Hold at -20°F. until use.

pjh (11547)

PTO-004131

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U-06865

FS155.00
February 3, 1997

**FAST & EASY PORK SAUSAGE
NATURAL SPICE
ALL DEXTROSE**

FORMULATION

Pork 40% \pm 1% Fat	93.87%
Water	3.00%
Encapsulated Salt	0.60%
Spice	2.53%

SPICE

Core Salt TBHQ	0.13%
Regular Salt	0.60%
Dextrose	0.70%
Ground Sage	0.30%
Black Pepper 10/20	0.33%
Crushed Red Pepper	0.07%
Herbalox, Type O	0.06%
Firminich 862.192 Lemon	0.10%
Spectra 88	0.12%
GB Grill Flavor	0.12%

PROCEDURE

1. Pre-break Regular Pork and 72% Lean Pork 1" and analray separately. Calculate meat mix for 40% \pm 1% Fat.
2. Add meat to Mixer and recheck fat. The mixer must be set at slow speed and only intermittently to allow addition of meat. Do not run mixer continuously when adding meat.
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5. Final grind 5/32" into V-Mag container.
6. Form on Formax Plate #7795 with tenderformer.
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8. After cooling, IQF and layer pack in 10 lb. Food Service box with inter leaf sheets and poly liners.
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pjh (11549)

PTO-004132

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U-06866**

CFO Dubuque 40% Fat Skimline Link

Oven temp 570°

speed 3.1 400 lbs Front only
yield about 76%

Cook line / Impingement

Dubuque 40% fat 2oz putty

Dice Fryer

Time 55 output 42%

Temp 380

Impingement oven

Voss 1' Height 2.00

Fan	75%	75%
temp	325°	325°
Humidity	85%	45%
Fan	70%	70%

Dwell 0.60

CFO Dubuque Skimline Link
26% Fat and 40% Fat

Oven Temp 392°F

Speed 4.75

Steam 400 lb tower

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U-06867

PTO-004133